Public Notice

U S Army Corps
of Engineers
Huntington District

In reply refer to Public Notice No.	Issuance Date:
2007-00652-GMR	February 28, 2008
Stream:	Closing Date:
Mad River	March 28, 2008

Please address all comments and inquiries to:
U.S. Army Corps of Engineers, Huntington District
ATTN: CELRH-OR-F Public Notice No. (*reference above*)
502 Eighth Street
Huntington, West Virginia 25701-2070 Phone: (304) 399-5210

PUBLIC NOTICE: The purpose of this public notice is to inform you of a proposal for work in which you might be interested. It is also to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

REGULATORY PROGRAM: Since its early history, the U.S. Army Corps of Engineers (Corps) has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the Corps Regulatory Program.

SECTION 10: The Corps is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate all work or structures in or affecting the course, condition or capacity of navigable waters of the United States (U.S.). The intent of this law is to protect the navigable capacity of waters important to interstate commerce.

SECTION 404: The Corps is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the discharge of dredged and fill material into all waters of the United States, including wetlands. The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

TO WHOM IT MAY CONCERN: The following application has been submitted for a Department of the Army Permit under the provisions of Section 404 of the Clean Water Act.

APPLICANT: Five Rivers Metro Parks
1375 E. Siebenthaler Avenue
Dayton, Ohio 45414

LOCATION: The project area is located in the Mad River in Dayton, Montgomery County, Ohio. The site is located in Eastwood Metro Park and is adjacent to Harshman Road as depicted on the attached map (Figure 1).

DESCRIPTION OF PROPOSED WORK: The applicant proposes to discharge fill material into waters of the United States in association with the construction of a whitewater park. Activities would include the installation of drop structures with self-scouring pools, the stabilization of river banks and creation of bank access areas through stone terracing; and the creation of a low water pilot channel and velocity shelters, against the bank and in mid channel, through the installation of boulder-clusters, random boulders and current deflectors. According to the applicant, the purpose of the project is to improve whitewater recreation, public access and safety characteristics of the Mad River.

The project area encompasses 2,100 linear feet of the Mad River. No other waters of the United States, including wetlands, are located in the project area. The applicant has provided information that currently whitewater paddling occurs at this location of the Mad River; however, the time that whitewater rafting is possible is limited to periods of high flow. The applicant has provided information that one existing hazard to navigation would be eliminated in association with this project. Bank terracing at existing access points would improve public access and protect existing native vegetation.

The applicant proposes to discharge fill material into the Mad River in association with three different activities, including 1) the creation of natural drop structures, 2) the addition of large riffle boulders and deflectors that would provide a low flow pilot channel and velocity shelters along the banks and 3) the placement of natural boulder and riparian terraces that would provide erosion protection and access areas along the banks. The applicant requests authorization to discharge a total of 5,200 cubic yards of material below the ordinary high water mark of the river in association with these activities. In addition, the applicant proposes to discharge a total of 3,550 cubic yards of material below the ordinary high water mark of the river in association with the construction of four temporary cofferdams needed to dewater the work areas during construction. Further narrative description of each of these activities is below. Additional details concerning each structure and the amount of fill proposed to be discharged in association with each structure is attached (Table 1).

The applicant proposes to discharge material into the Mad River in association with the installation of three different in-stream design features. The first type of structure is a "U" Drop Structure, which is intended to provide a deep center channel that would act to pass sediment, woody debris and ice down the main channel. The elevated wings and added boulders would provide velocity barriers and large eddy habitat. Three at-grade U structures and one detached "wave stimulator" drop structure would be constructed using large diameter boulders at each location. These structures extend into the channel and would be anchored into the streambed and into each bank to ensure that they will withstand flood flows. Concrete grout would be used to create a solid base and foundation for the structures. Pools would be located below each

structure. The natural drop associated with each drop structure would dissipate stream energy and aerate the water.

The second type of structure is boulder clusters and random boulders. These structures would be placed in more shallow areas to create velocity barriers. A total of 35 eight foot diameter boulders and boulder clusters would be placed at various locations below plunge pools and within riffle areas to enhance the quality of the riffle as well as add in-stream cover and resting areas.

The third type of structure is offset current deflectors and random boulder combinations. Double current deflectors would be installed at two locations and one single current deflector would be installed. Boulders would be anchored into the bank and bed of the river to ensure they withstand flood flows. Deflectors serve to maintain a deeper main thalweg of the river and to create a natural meander to the low water channel invert, thereby contributing to the riffle, pool and glide characteristics of the reach.

In order to stabilize the banks and provide safe public access to the river, natural rock terracing would be constructed in three areas along the project. Boulders ranging in size from 3' to 5' would be utilized during construction of the terracing.

In order to temporarily dewater the work areas, the applicant proposes to construct a total of four cofferdams. One cofferdam would be constructed at a time and would be used to dewater the specific area that is being constructed. Each cofferdam would result in the discharge of up to 1,000 cubic yards of native cobble and gravel below the ordinary high water mark of the river. The cofferdam material would be removed following completion of construction activities and the original stream bed contours would be re-established.

MITIGATION: To compensate for proposed impacts to jurisdictional waters of the United States, the applicant has proposed to remove existing in-stream hazards to navigation. An existing large log jam would be removed from between the abandoned railroad abutments located just downstream of the proposed whitewater park. Other navigation hazards, including concrete block and debris would also be removed.

To compensate for proposed impacts to jurisdictional waters, the applicant also proposes to incorporate features that serve to facilitate the whitewater rafting park and also increase habitat diversity for aquatic life. The U Drop structures described above are expected to create scour pools that have been shown to increase over-winter habitat. The addition of rock structures, un-grouted scoured rock toe armoring, and un-grouted rock bank work would be expected to enhance interstitial habitat within the reach. The applicant has provided information that the U Drop structures enhance fish and invertebrate habitat through the creation of a riffle, run, and pool environment. In addition, the applicant states that the U Drop structures create feeding and resting lanes for fish through eddies that exist on the perimeter of pools. The proposed boulder clusters, random boulders, and current deflectors described above are also expected to increase available habitat for fish and invertebrates.

ATTACHMENTS: Plans of the proposed work are attached to this notice.

WATER QUALITY CERTIFICATION: A Section 401 Water Quality Certification is required for this project. It is the applicant's responsibility to obtain that certification from the Ohio Environmental Protection Agency.

HISTORIC & CULTURAL RESOURCES: HISTORIC & CULTURAL RESOURCES: The National Register of Historic Places has been consulted and it has been determined there are no properties currently listed on the register that are in the area affected by the project. A copy of this public notice will be sent to the Ohio Historic Preservation Office (OHPO) for their review. Comments concerning archeological sensitivity of a project area should be based upon collected data.

THREATENED & ENDANGERED SPECIES: This project is located within the known or historic range of the Indiana bat (Endangered); eastern massasauga (Candidate); and rayed bean mussel (C).

Based on the project location and proximity to known Indiana bat capture sites, it was determined a habitat assessment would be needed to document whether suitable habitat for the Indiana bat is located in the project area. The applicant completed and submitted a habitat assessment, which concluded no suitable roosting habitat for the Indiana bat is located in the project limits. Foraging habitat of marginal quality was documented. Therefore, based on the lack of suitable roosting habitat and the presence of marginal quality foraging habitat, it has been determined this proposal may affect, but is not likely to adversely affect, the Indiana bat.

Based on project location and habitat available, it was determined a mussel survey would be necessary to document this proposal's effects on the rayed bean mussel. This survey was conducted in September 2007. Based on information provided by the applicant, no live native mussel species were documented in the project area during this survey. Therefore, it has been determined this proposal would have no affect on the rayed bean mussel.

Based on project location and habitat availability, it has been determined this project would have no affect on the eastern massasauga.

This public notice serves as a request to the U.S. Fish and Wildlife Service for any additional information they may have whether any listed or proposed to be listed endangered or threatened species may be present in the area that would be affected by the activity, pursuant to Section 7(c) of the Endangered Species Act of 1972 (as amended).

PUBLIC INTEREST: Any person who has an interest, which may be adversely affected by the issuance of a permit, may request a public hearing. The request must be submitted in writing to the District Engineer on or before the expiration date of this notice and must clearly set forth the interest which may be adversely affected and the manner in which the interest may be adversely affected by the activity.

Interested parties are invited to state any objections they may have to the proposed work. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are: conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. In addition, the evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under the authority of Section 404(b) of the Clean Water Act. Written statements on these factors received in this office on or before the expiration date of this public notice will become a part of the record and will be considered in the final determination. A permit will be granted unless its issuance is found to be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

CLOSE OF COMMENT PERIOD: All comments pertaining to this Public Notice must reach this office on or before the close of the comment period listed on page one of this Public Notice. Persons wishing to submit comments, objections or requests for public hearings concerning the Corps of Engineers permit should write:

U.S. Army Corps of Engineers
ATTN: CELRH-OR-F **Public Notice No. 2007-00652-GMR**
502 8th Street
Huntington, West Virginia 25701-2070

Please note, the names and addresses of those who submit comments in response to this public notice become part of our administrative record and, as such, are available to the public under provisions of the Freedom of Information Act. Thank you for your interest in our nation's water

resources. If you have any questions concerning this public notice, please call Ms. Desiree L. Hann of the North Regulatory Section at 304-399-5210.

Ginger Mullins
Chief, Regulatory Branch

(O)

LOCATION

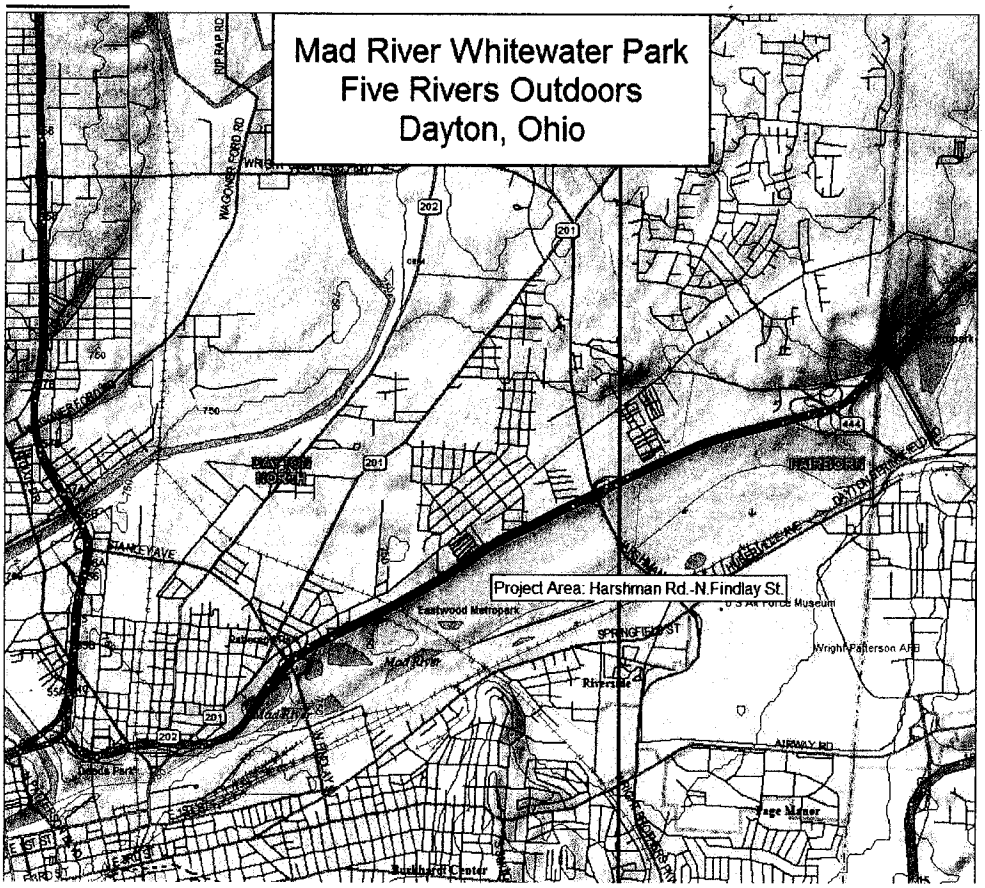

Figure 1. The proposed project area..

Five Rivers Metro Parks
2007-00652-GMR – Mad River
Montgomery County, Ohio
Location Map
Figure 1 of 12

Recreation Engineering and Planning
wwparks.com

ESTIMATED QUANTITIES

Mad River Whitewater Park

404 Permit Application- Quantities of Fill

Item Number	Material		Estimated Quantity		Unit
Structure #1, Drop Structure	3'-6' Boulders		750		Cubic Yards
Concrete Grout	Concrete		115		Cubic Yards
Structure #2, Drop Structure	3'-6' Boulders		750		Cubic Yards
Concrete Grout	Concrete		115		Cubic Yards
Coffer Dam (Structure #1 & #2)	Temoporary fill: native cobble and gravel		1000		Cubic Yards
Offset Current Deflector (#1)	3'-6' Boulders		350		Cubic Yards
Concrete Grout	Concrete		55		Cubic Yards

Five Rivers Metro Parks
2007-00652-GMR – Mad River
Montgomery County, Ohio
Type and quantity of fill
Table 1 (page 1 of 3)

Recreation Engineering and Planning
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Boulder | CO | 80302
(303) 545-5883

Recreation Engineering and Planning
wwparks.com

Offset Current Deflector (#2)	3'-6' Boulders		250		Cubic Yards
Concrete Grout	Concrete		40		Cubic Yards
Offset Current Deflector (#3)	3'-6' Boulders		300		Cubic Yards
Concrete Grout	Concrete		45		Cubic Yards
Offset Current Deflector (#4)	3'-6' Boulders		400		Cubic Yards
Concrete Grout	Concrete		60		Cubic Yards
Coffer Dam (Deflectors#1-#4)	Temporary fill: native cobble and gravel		1000		Cubic Yards
Offset Current Deflector (#5)	3'-6' Boulders		200		Cubic Yards
Concrete Grout	Concrete		30		Cubic Yards
Coffer Dam (Deflector #5)	Temporary fill: native cobble and gravel		550		Cubic Yards

Five Rivers Metro Parks
2007-00652-GMR – Mad River
Montgomery County, Ohio
Type and quantity of fill
Table 1 (page 2 of 3)

Recreation Engineering and Planning
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Structure #3 Detached Wave Stimulator	3'-6' Boulders		600		Cubic Yards
Concrete Grout	Concrete		90		Cubic Yards
Structure #4, Drop Structure	3'-6' Boulders		550		Cubic Yards
Concrete Grout	Concrete		85		Cubic Yards
Coffer Dam (Structures #3 & #4)	Temporary fill: native cobble and gravel		1000		Cubic Yards
Boulder Clusters/Random Boulders	6'-8' Boulders		250		Cubic Yards
Boulder Bank Terracing	3'-5' Boulders		65		Cubic Yards
Concrete Pedestrain Trail	Concrete		100		Cubic Yards

Five Rivers Metro Parks
2007-00652-GMR – Mad River
Montgomery County, Ohio
Type and quantity of fill
Table 1 (page 3 of 3)

Recreation Engineering and Planning
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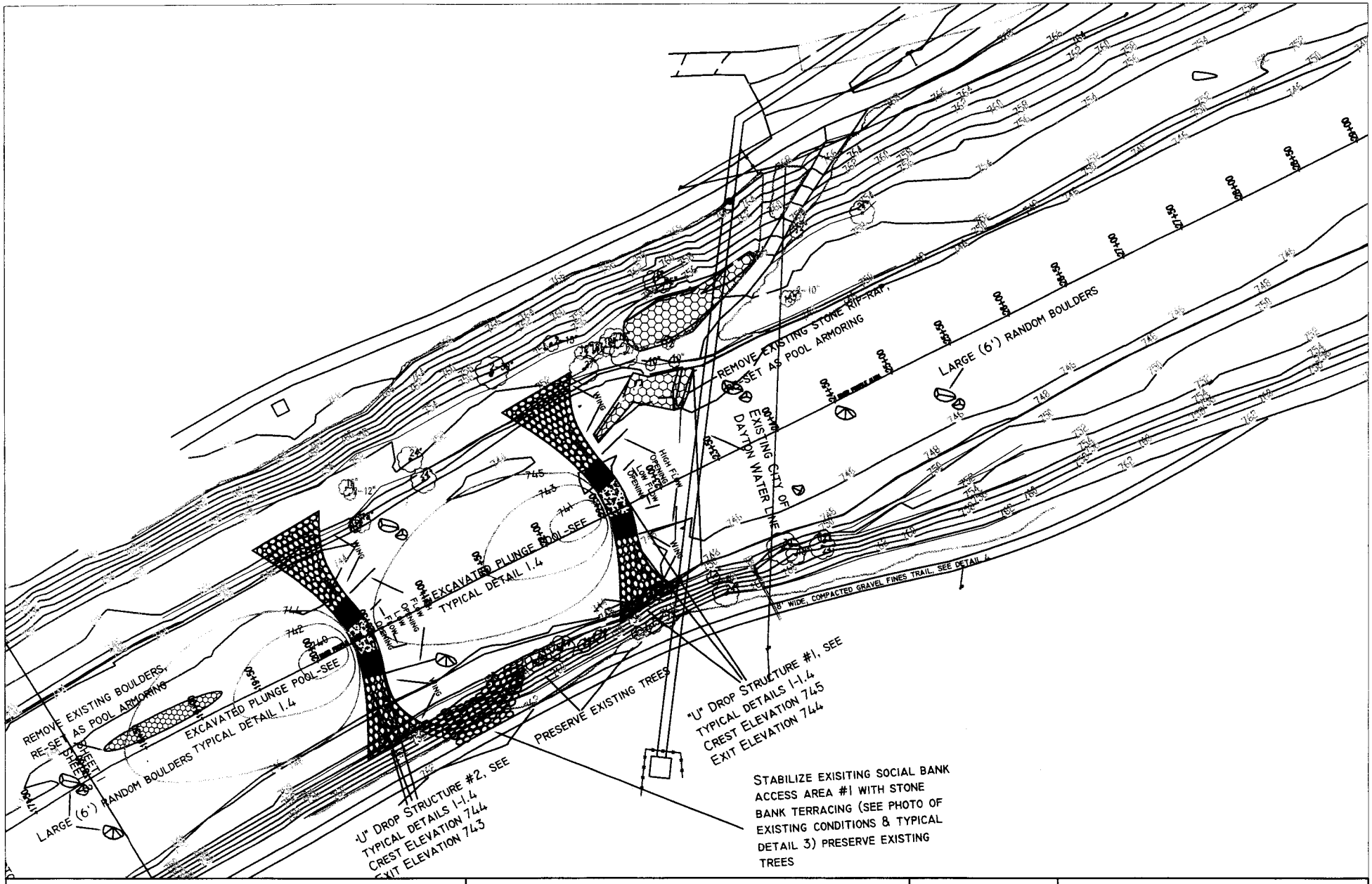

MAD RIVER WHITEWATER PARK

FIVE RIVERS OUTDOORS
1375 E. SIEBENTHALER AVE
DAYTON, OH 45414
(937) 275-7275
METROPARKS.ORG

Five Rivers MetroParks

SCALE: 1"=100'

0 100

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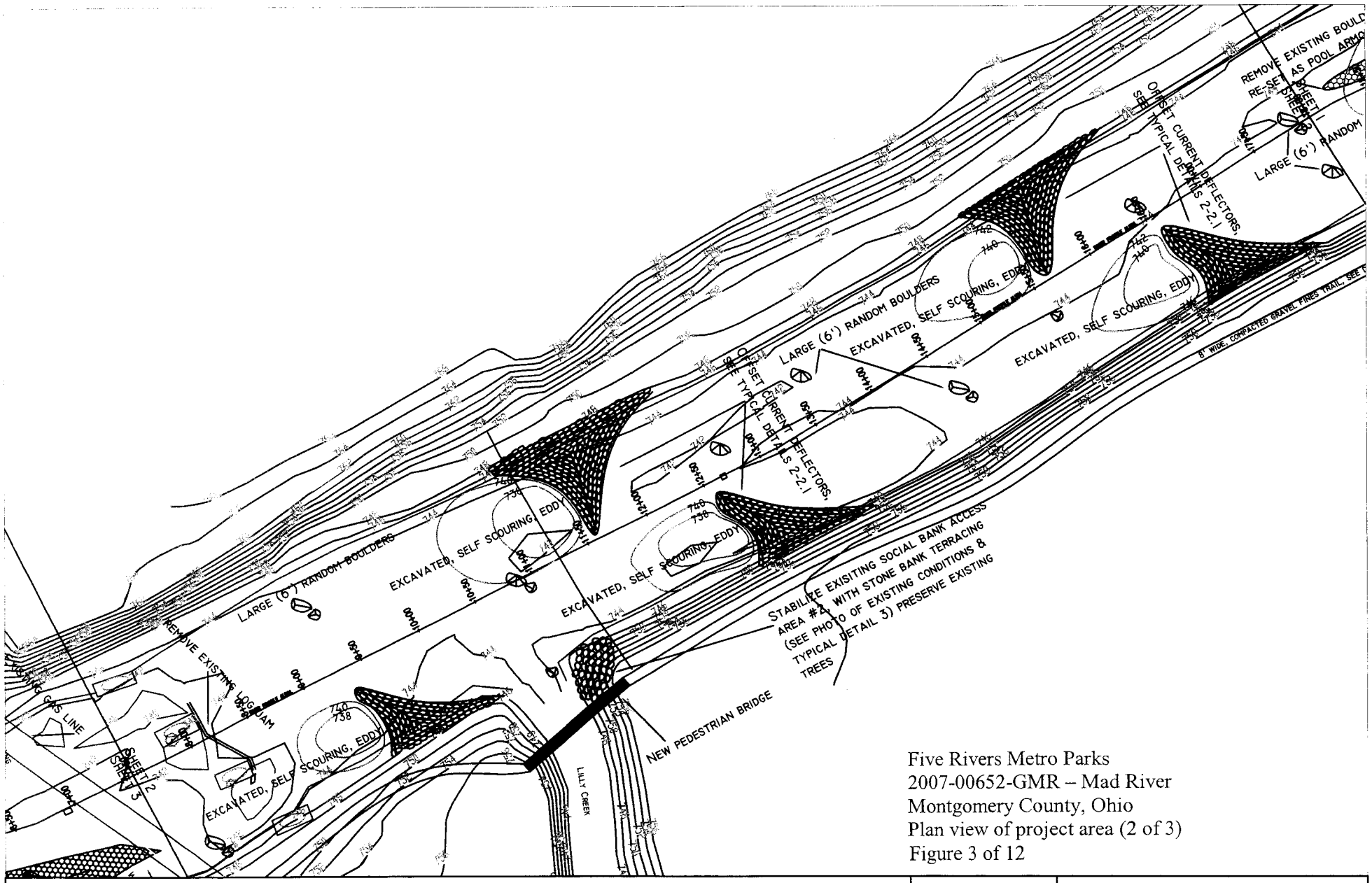
Five Rivers Metro Parks
2007-00652-GMR – Mad River
Montgomery County, Ohio
Plan View of project area (1 of 3)
Figure 2 of 12



Five Rivers Metro Parks
2007-00652-GMR – Mad River
Montgomery County, Ohio
Plan view of project area (2 of 3)
Figure 3 of 12

MAD RIVER WHITEWATER PARK

FIVE RIVERS OUTDOORS
1375 E. SIEBENTHALER AVE
DAYTON, OH 45414
(937) 275-7275
METROPARKS.ORG

Five Rivers MetroParks

SCALE: 1"=100'

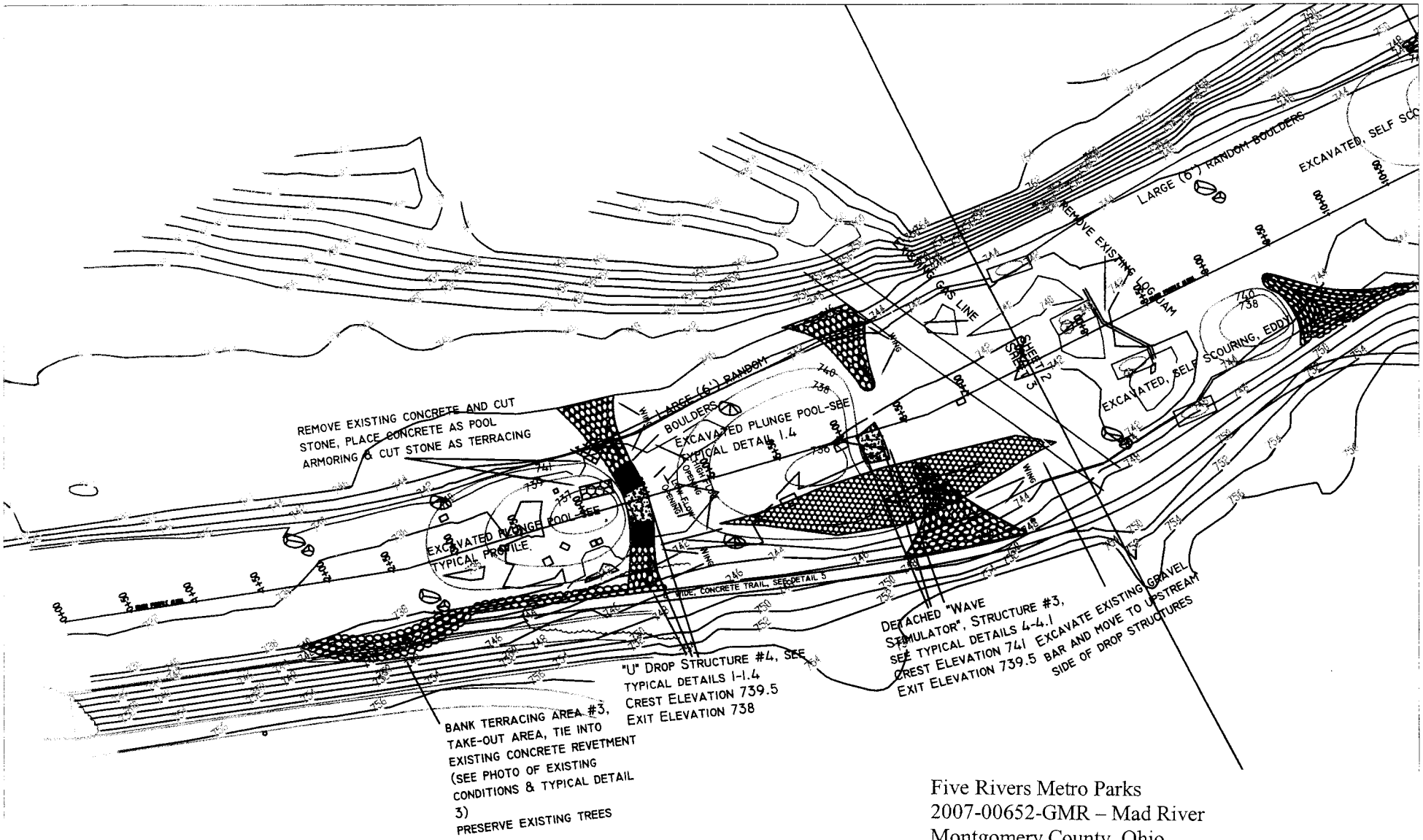
0 100

DESIGNED: GML
DRAFTED: MCH
CHECKED: GML
REVISED:

PLAN VIEW SHEET 2 OF 3

REP
485 ARAPAHOE AVE.
BOULDER, CO
80302
(303)-545-5883

Recreation Engineering and Planning
wwparks.com



Five Rivers Metro Parks
2007-00652-GMR – Mad River
Montgomery County, Ohio
Plan view of project area (3 of 3)
Figure 4 of 12

MAD RIVER WHITEWATER PARK

FIVE RIVERS OUTDOORS
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DAYTON, OH 45414
(937) 275-7275
METROPARKS.ORG

Five Rivers MetroParks

SCALE: 1"=100'

0 100

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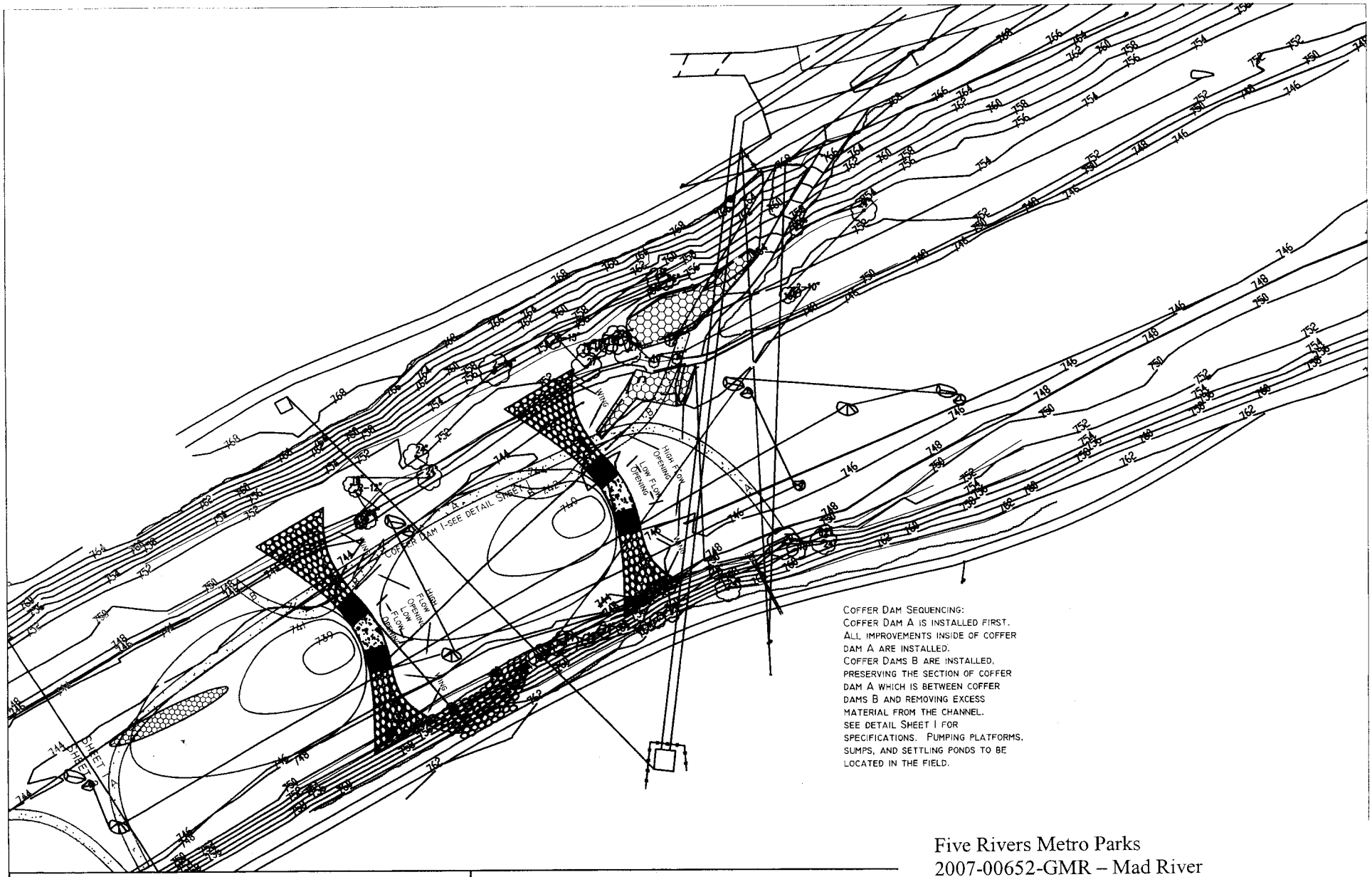
DESIGNED: GML
DRAFTED: MCH
CHECKED: GML
REVISED:

PLAN VIEW SHEET 3 OF 3

REP
485 ARAPAHOE AVE.
BOULDER, CO 80302
(303)-545-5883

Recreation Engineering and Planning
wwparks.com



COFFER DAM SEQUENCING:
COFFER DAM A IS INSTALLED FIRST.
ALL IMPROVEMENTS INSIDE OF COFFER DAM A ARE INSTALLED.
COFFER DAMS B ARE INSTALLED, PRESERVING THE SECTION OF COFFER DAM A WHICH IS BETWEEN COFFER DAMS B AND REMOVING EXCESS MATERIAL FROM THE CHANNEL.
SEE DETAIL SHEET 1 FOR SPECIFICATIONS. PUMPING PLATFORMS, SUMPS, AND SETTLING PONDS TO BE LOCATED IN THE FIELD.

MAD RIVER WHITEWATER PARK

FIVE RIVERS OUTDOORS
1375 E. SIEBENTHALER AVE
DAYTON, OH 45414
(937) 275-7275
METROPARKS.ORG

SCALE: 1"=100'

0 100

Five Rivers Metro Parks
2007-00652-GMR – Mad River
Montgomery County, Ohio
Plan view of cofferdams (1 of 3)
Figure 5 of 12

COFFER DAMS-SHEET 1 OF 3

BOULDER, CO 80302
(303)-545-5883
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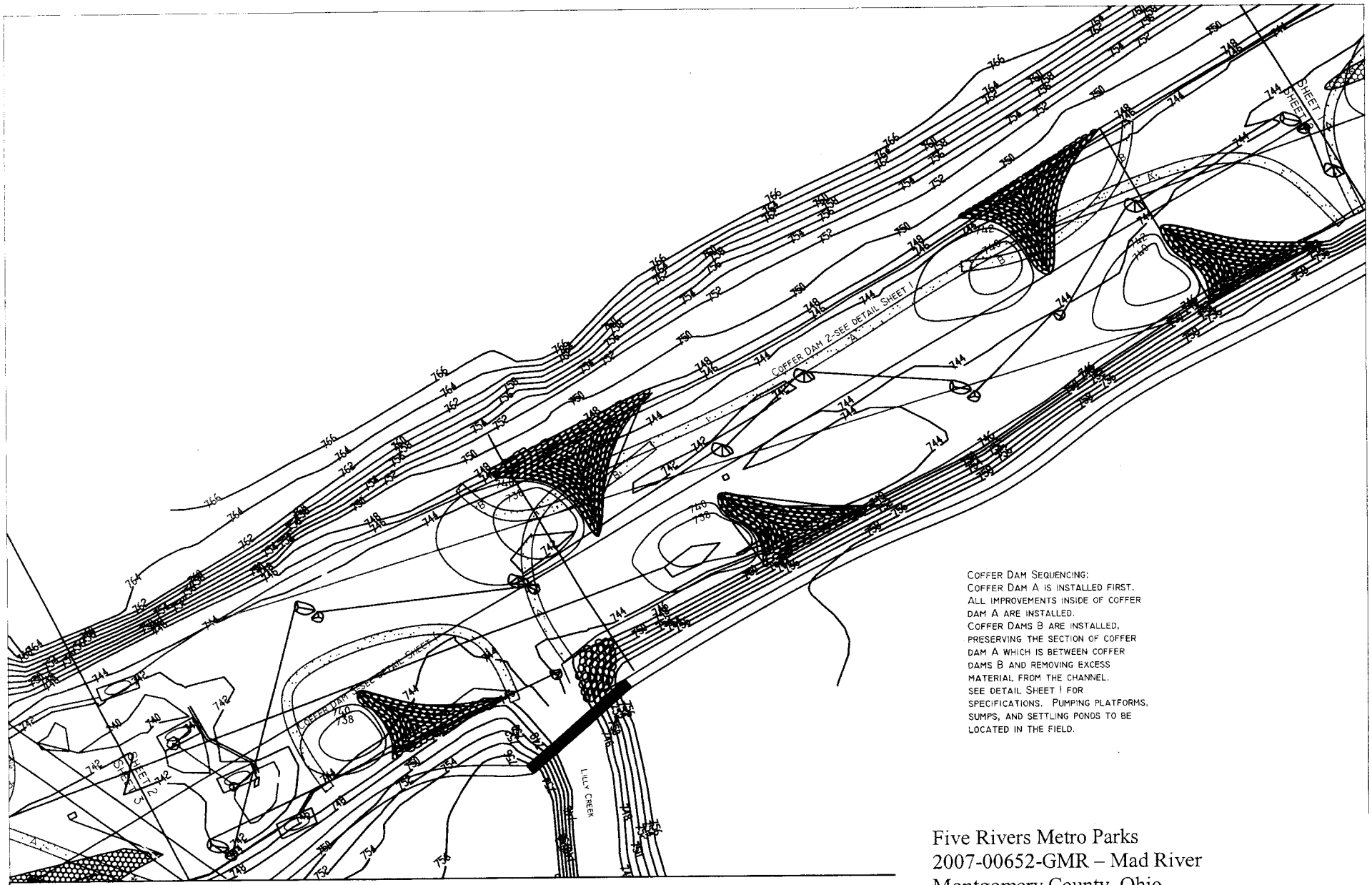

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MAD RIVER WHITEWATER PARK

FIVE RIVERS OUTDOORS
1375 E. SIEBENTHALER AVE
DAYTON, OH 45414
(937) 275-7275
METROPARKS.ORG

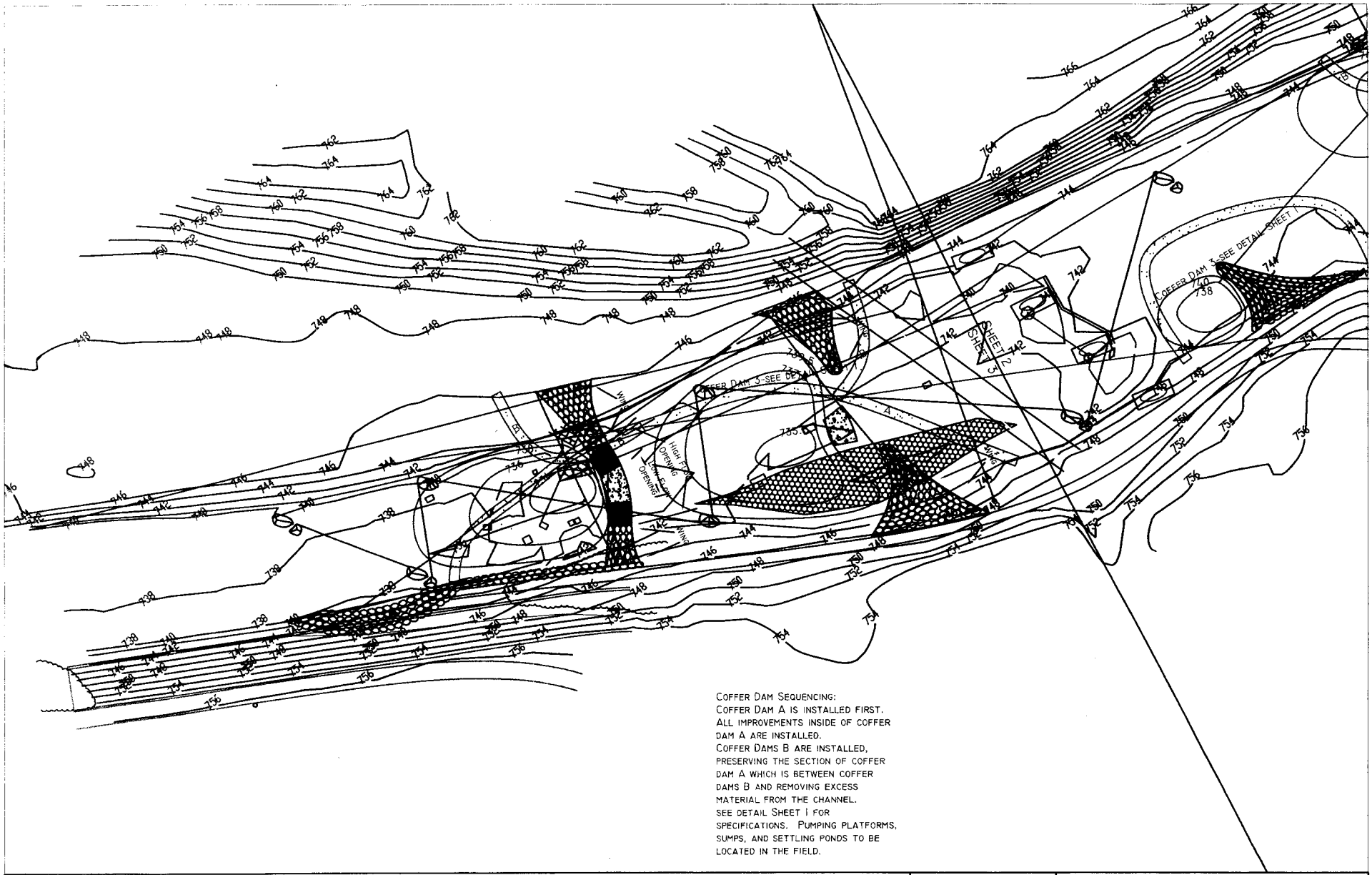
SCALE: 1"=100'

0 100

Five Rivers Metro Parks
2007-00652-GMR – Mad River
Montgomery County, Ohio
Plan view of cofferdams (2 of 3)
Figure 6 of 12

COFFER DAMS-SHEET 2 OF 3

BOULDER, CO
80302
(303)-545-5883
wwparks.com



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Five Rivers MetroParks

SCALE: 1"=100'

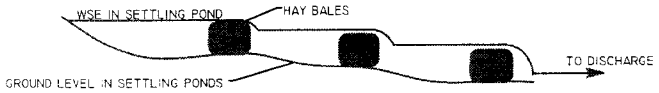
0 100

N

DESIGNED: GML
DRAFTED: MCH
CHECKED: GML

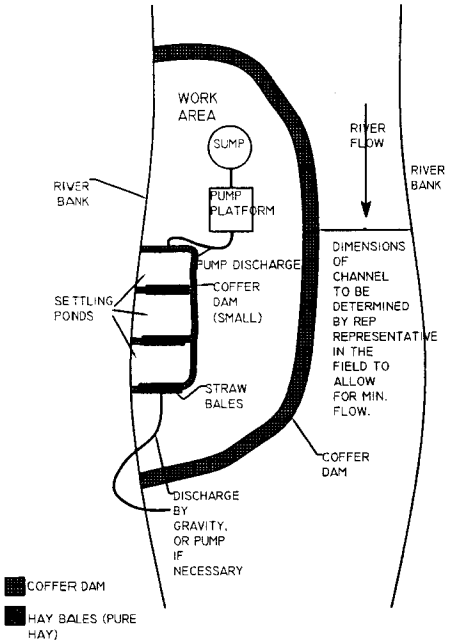
REP

Five Rivers Metro Parks
2007-00652-GMR – Mad River
Montgomery County, Ohio
Plan view of cofferdams (3 of 3)
Figure 7 of 12



TYPICAL SECTION IN SETTLING POND

NOTE: SCHEMATIC LAYOUT TO DESCRIBE FUNCTIONALITY ONLY. ACTUAL LAYOUT TO BE DETERMINED FOR EACH STRUCTURE.

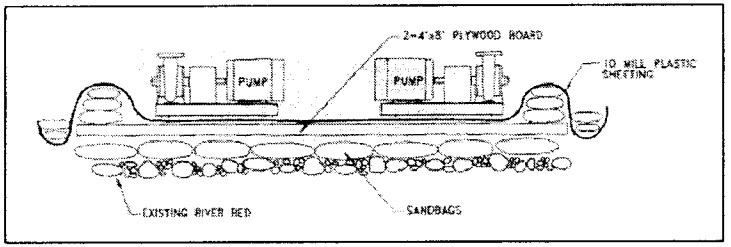


NOTES: DEWATERING AREA DETAILS:

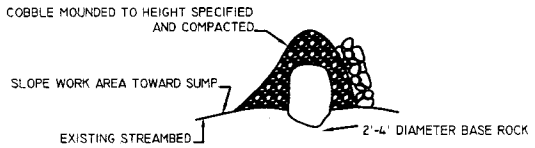
1. SUMPS CAN BE MADE FROM DIGGING A HOLE AND INSERTING A PERFORATED PIPE AND BACKFILLING WITH CLEAN DRAIN ROCK OR OTHER APPROVED METHOD.
2. SETTLING BASINS SHOULD BE BASED UPON SITE SPECIFICS (I.E. INFILTRATION AND SETTLING RATES, PARTICLE SIZE). DETENTION TIMES WILL BE BASED UPON THE SIZE OF THE SUSPENDED PARTICLES. IF THERE IS EXCESSIVE LEAKAGE THROUGH ANY COFFER DAM, BASE ROCK IS TO BE LINED WITH VISQUENE PRIOR TO BEING COVERED IN COBBLE. NUMBER OF SETTLING PONDS TO BE DETERMINED BY CLARITY OF DISCHARGE FLUID.
3. UPON COMPLETION VISQUENE AND SETTLED FINES SHALL BE REMOVED AND DISPOSED OF OFFSITE BY THE CONTRACTOR.
4. PUMP STATION SHALL BE ELEVATED. FUEL CONTAINMENT BMP'S SHALL BE ONSITE AT ALL TIMES.
5. PUMP REMAINING WATER IN CONSTRUCTION AREA AS NECESSARY, TO MANAGE GROUNDWATER AND LEAKAGE. ALL DISCHARGED WATER MUST BE ROUTED TO THE SETTLING BASINS.

TYPICAL LAYOUT DEWATERING AREA

NOTE: SCHEMATIC LAYOUT TO DESCRIBE FUNCTIONALITY ONLY. ACTUAL LAYOUT TO BE DETERMINED FOR EACH STRUCTURE.



TYPICAL PUMP PLATFORM



TYPICAL COFFER DAM CROSS SECTION

MAD RIVER WHITEWATER PARK
FIVE RIVERS OUTDOORS
1375 E. SIEBENTHALER AVE
DAYTON, OH 45414
(937) 275-7275
METROPARKS.ORG

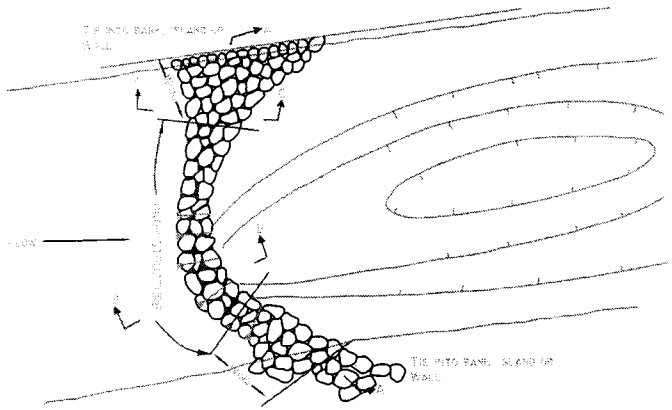
Five Rivers MetroParks

DEWATERING PLAN

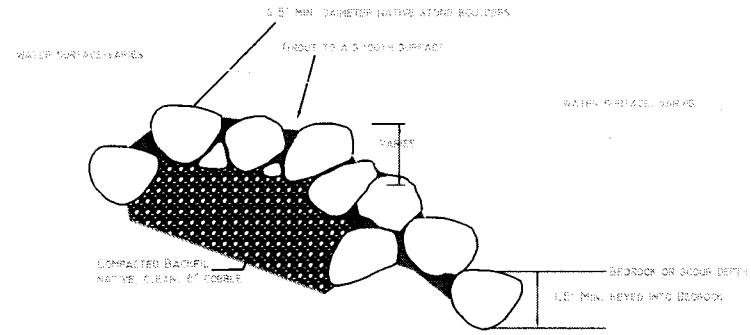
NO SCALE

DESIGNED: GML
DRAFTED: MCH

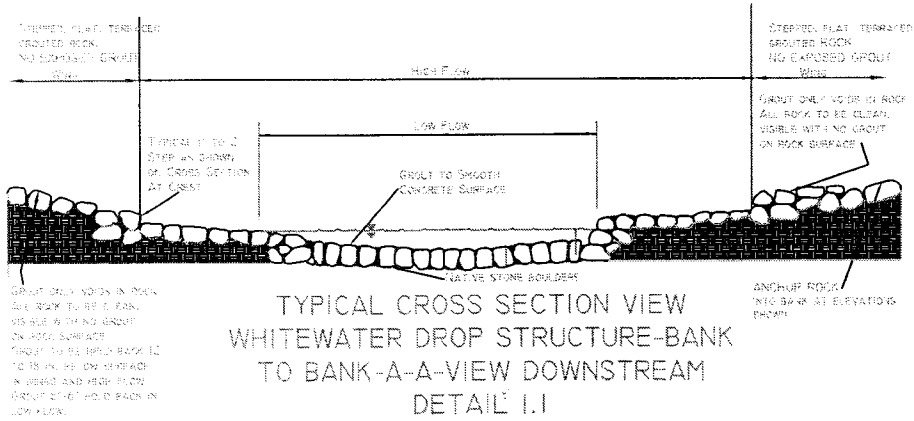
Five Rivers Metro Parks
2007-00652-GMR – Mad River
Montgomery County, Ohio
Plan and cross section view typical cofferdam
Figure 8 of 12



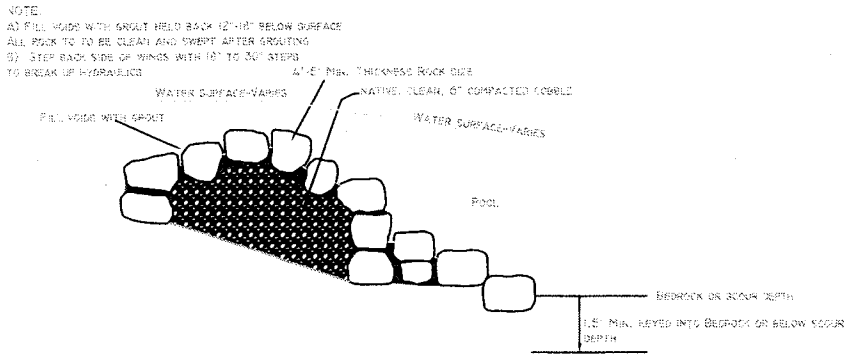
TYPICAL DROP STRUCTURE
DETAIL 1



TYPICAL PROFILE OF ROCK IN CENTER LOW-FLOW, B-B
N.T.S
DETAIL 1.2



TYPICAL CROSS SECTION VIEW
WHITEWATER DROP STRUCTURE-BANK
TO BANK-A-A-VIEW DOWNSTREAM
DETAIL 1.1



TYPICAL PROFILE OF ROCK IN "WING", C-C
N.T.S
DETAIL 1.3

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DROP STRUCTURE-TYPICAL DETAILS 1-1.3

NO SCALE

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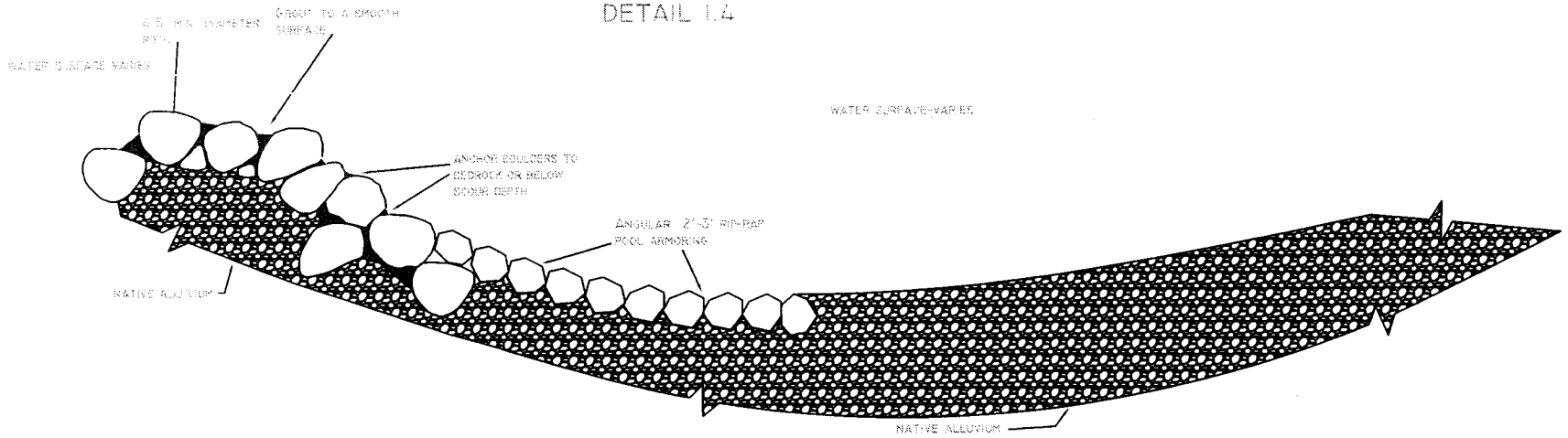
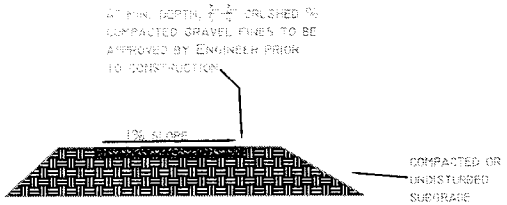
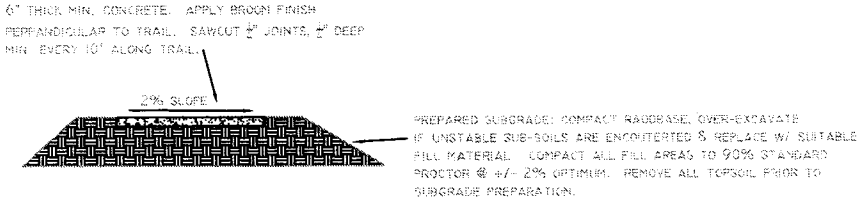
2007-00652-GMR – Mad River
Montgomery County, Ohio
Typical drop structure
Figure 9 of 12

TYPICAL PROFILE OF DROP STRUCTURE. IN CENTER LOW-FLOW
PLUNGE POOL WITH POOL ARMORING
N.T.S
DETAIL 1.4





TYPICAL GRAVEL FINES TRAIL SECTION-DETAIL 4



TYPICAL CONCRETE TRAIL SECTION-DETAIL 5

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TYPICAL DETAILS 1.4 & 4-5
NO SCALE

DESIGNED: GML
DRAFTED: MCH
CHECKED: GMI

REP

[redacted]

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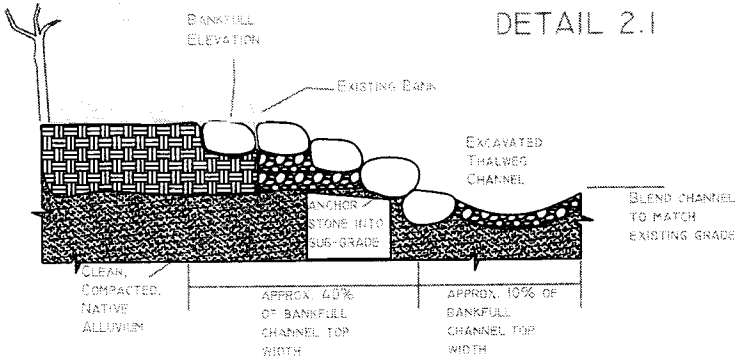
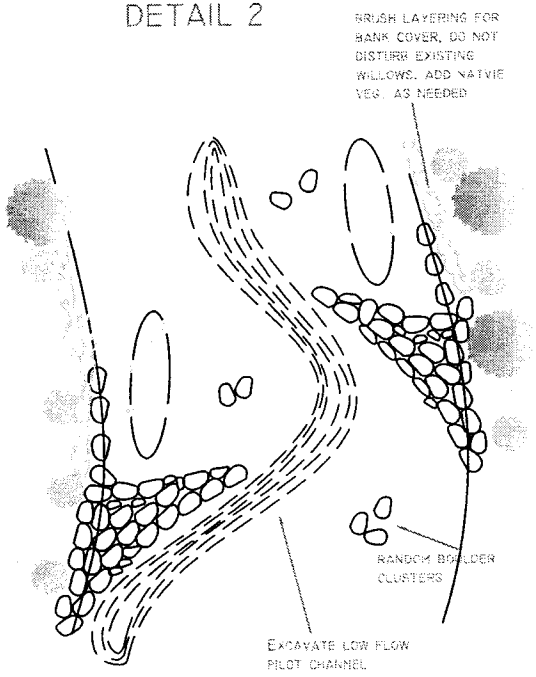
Montgomery County, Ohio
Profile of drop structure
Figure 10 of 12

CURRENT DEFLECTOR
CROSS SECTION
VIEW-TYPICAL
N.T.S
DETAIL 2.1



TYPICAL OFFSET CURRENT DEFLECTORS-PLAN VIEW
N.T.S
DETAIL 2



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TYPICAL DETAIL 2-2.1
NO SCALE

DESIGNED: GML
DRAFTED: MCH
CHECKED: GML

REP

Recreation

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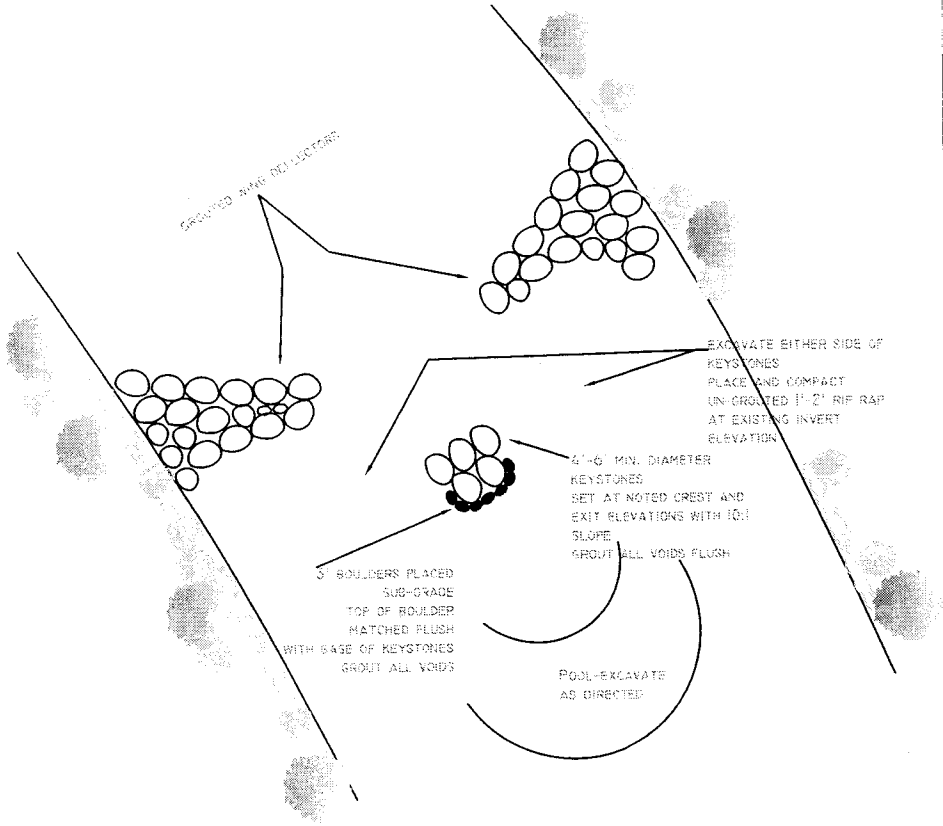
Typical current deflector
Figure 11 of 12

DETACHED WAVE STIMULATOR- PLAN VIEW

NOT TO SCALE

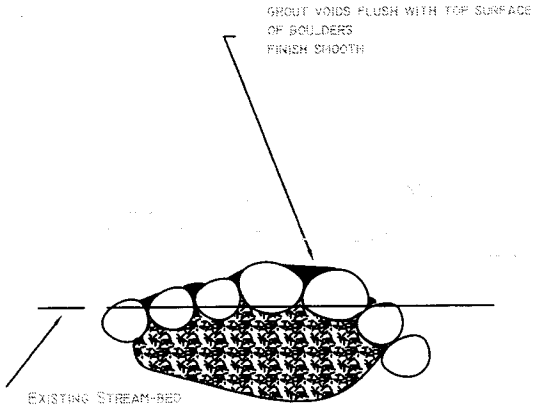
DETAIL 4



DETACHED WAVE STIMULATOR- PROFILE VIEW

NOT TO SCALE

DETAIL 4.1



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TYPICAL DETAIL 4-4.1
NO SCALE

DESIGNED: GML
DRAFTED: MCH
CHECKED: GML

REP

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Typical wave stimulator
Figure 12 of 12